



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/537,326	08/08/2006	Nile A. Lahr	CTCZ 2 00079	1874
20879 7590 08/13/2010 EMCH, SCHAFER, SCHAUB & PORCELLO CO P O BOX 916 ONE SEAGATE SUITE 1980 TOLEDO, OH 43697				
EXAMINER				
MINSKEY, JACOB T				
ART UNIT		PAPER NUMBER		
1791				
MAIL DATE		DELIVERY MODE		
08/13/2010		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/537,326

Applicant(s)

LAHR ET AL.

Examiner

JACOB T. MINSKEY

Art Unit

1791

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 May 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 5-10, 13 and 21-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-10, 13 and 21-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB06)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-10, 13, and 21-30 have been considered but are moot in view of the new ground(s) of rejection.
2. Applicant has amended the claims to clarify the plates stack with the inner radius in the circumferential direction with the gaps forming in a radial direction.
3. The arguments that Tanaka provides for a segmented mold and not a stackable mold is persuasive in view of the new amendments.
4. A new search is thus required and a new ground of rejection is presented below.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 1-3, 5-7, 10, 13, 21-26, and 29-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sagawa et al, JP 02295706 A.

9. Regarding claims 1, 21, and 30, Sagawa teaches a mold and method of making a mold for forming tread on tires by stacking plates that have a vent slit (item 6) on the surface of the segments (see English abstract) that fit together to form spaces (item 7, see figure 1) that allows for air to be vented from the mold without allowing for material to escape and create spew and a need for trim work (see English Abstract). Sagawa teaches that the slits (item 6) have a maximum dimension of 0.05 mm and that the secondary spaces (item 7) that extend beyond the slits in the circumferential direction (see figure 1) are of a greater cross-section for the benefit of aiding the removal of air from the mold (see abstract).

10. Sagawa does not provide details on how the slits are formed, other than stating that they are internationally created in the stackable mold segments (abstract). While not explicitly stating that they are machined, it would have been obvious to one of

ordinary skill in the art at the time of the invention that this would have been a preferred manner in forming the slits in the segments for control of forming the slits of less than 0.05 mm.

11. Additionally, Sagawa does not provide size parameters for the space 7. Sagawa only states that the slits (item 6) can not be greater than 0.05mm and that the space 7 extends beyond that with an increased cross section. Sagawa teaches all of the claimed limitations except for the cross section of space 7. It would have been obvious to one of ordinary skill in the art at the time of the invention to optimize the size of the secondary gap, since it has been held that where the general conditions of a claim have been disclosed in the art discovering the optimal or workable ranges or values of a known parameter is within the ability of one of ordinary skill in the art (In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235).

12. It is the Examiner's stance that the teaching of Sagawa that the secondary vent space must be greater in cross section in the same shape and direction of the instant application provides the necessary teaches for an average artisan to optimize the size of the secondary vent hole.

13. Regarding claims 2, 13, and 22, Sagawa further teaches that the discrete regions (slits, item 6) are at a depth of no more than 0.05mm, which reads on the limitation of 0.002-0.008 inches (see abstract).

14. Regarding claims 3 and 24, Sagawa is silent on the thickness of the plates of the mold. These claims require that the majority of the plates are less than one inch thick. One of ordinary skill in the art at the time of the invention would have found it obvious to

make the plates less than an inch thick because all of the gaps and alignment measurements are in the range of millimeters or tenths of millimeters. If the thickness of the plates were bigger than an inch, these small ranges would be hard to control during the molding operation. Additionally, where the claimed and prior art apparatus or products are identical or substantially identical in structure or composition, a prima facie case of either anticipation or obviousness has been established. In re Best, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). In other words, when the structure recited in the reference is substantially identical to that of the claims, the claimed properties or functions are presumed to be inherent.

15. Regarding claims 5 and 23, Sagawa remains as applied above, but only teaches the cross section and relationship of the various gaps and vents. Sagawa is silent on the length of the areas.

16. One of ordinary skill in the art at the time of the invention would have found it obvious to make the length of the paths less than an inch thick because all of the gaps and alignment measurements are in the range of millimeters or tenths of millimeters. If the length of the paths were bigger than an inch, these small ranges would be hard to control during the molding operation. Also, the figures depict the different sections that connect to each other, see Figures. It would have been obvious to keep these distances as short as possible in order to get the air out of the mold as efficiently as possible. Additionally, where the claimed and prior art apparatus or products are identical or substantially identical in structure or composition, a prima facie case of either anticipation or obviousness has been established. In re Best, 562 F.2d 1252,

1255, 195 USPQ 430, 433 (CCPA 1977). In other words, when the structure recited in the reference is substantially identical to that of the claims, the claimed properties or functions are presumed to be inherent.

17. Regarding claims 6 and 25, Sagawa further teaches the use of an alignment pin (see figures 1, 3, 5, and 13).

18. Regarding claims 7 and 26, Sagawa further teaches the use of an alignment pin in the mold, but is silent on if the pin is threaded or not.

19. A person of ordinary skill in the art, upon reviewing the abstract and figures of Sagawa, would have recognized that a thread is one of a finite number of ways a pin can be inserted into a mold (threaded or straight). Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to try using a threaded screw in the method because a person with ordinary skill has a good reason to pursue the known option within his or her technical grasp. "A person of ordinary skill has a hood reason to pursur the known option within his or her technical grasp, If this leads to the anticipated success, it is likely the product not of innovation but or ordinary skill and common sense." KSR Int'l Co. v. Teleflex Inc., 127 S.Ct. 1727, 82 USPQ2d 1385 (2007).

20. Regarding claims 10 and 29, Sagawa further teaches that the inside radius of the segments create the form of the tire mold (see abstract and figures).

21. Claims 8-9 and 27-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sagawa et al, JP 02295706 A in view of Fike, USP 6,632,393.

22. Regarding claims 8-9 and 27-28, Sagawa provides figures that could be for either a clamshell or segmented mold, as there are no figures showing the mold in an open state.

23. In the same field of endeavor of using a mold to form tire treads, Fike teaches that there are two types of molds that are commonly used in tire making, clam shell and segmented molds (see column 1). Fike also teaches that one of ordinary skill in the art can convert one type into another (column 7 lines 36-40).

24. A person of ordinary skill in the art, upon reading the teachings of Fike (and Tanaka), would have recognized that a clam shell mold is one of a finite number of mold types that can be utilized in tire production. Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to try using either a clamshell or segmented mold in the method because a person with ordinary skill has a good reason to pursue the known option within his or her technical grasp for the benefit of utilizing already owned equipment or utilizing equipment with less moving parts for ease of use. "A person of ordinary skill has a good reason to pursue the known option within his or her technical grasp. If this leads to the anticipated success, it is likely the product not of innovation but of ordinary skill and common sense." KSR Int'l Co. v. Teleflex Inc., 127 S.Ct. 1727, 82 USPQ2d 1385 (2007).

Conclusion

25. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **JACOB T. MINSKEY** whose telephone number is (571)270-7003. The examiner can normally be reached on **Monday to Friday 7:30-5:00 EST**.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JTM

/Eric Hug/
Primary Examiner, Art Unit 1791